

U.S. DEPARTMENT OF ENERGY
FEDERAL ENERGY TECHNOLOGY CENTER
CLIMATE CHANGE FUEL CELL PROGRAM

AGENCY: U.S. Department of Energy (DOE), Federal Energy Technology Center

ACTION: Solicitation for Financial Assistance Applications

SUMMARY:

In the Defense Appropriations Conference Report, dated September 23, 1997, Congress agreed to provide funding to the Department of Defense (DOD) for the continuation of the Climate Change Fuel Cell Program. The responsibility for procurement, program management, and contract administration for these funds has been delegated to the Department of Energy, Federal Energy Technology Center (FETC). The objective of the cost-shared "Climate Change Fuel Cell Program" is to simultaneously stimulate commercialization of stationary fuel cell power plants to reduce greenhouse gas emissions through the efficient use of fossil fuels. Successful offerors will demonstrate, through their applications, a commitment to purchase, install, operate, and maintain fuel cell power plant(s) with a combined capacity rated between 5 and 3,000 kW. No power plants purchased before the release dates of this solicitation are eligible for this grant program. This project will culminate with a summary report after one year of power plant operation. Grants will be awarded consistent with the amounts defined in the Funding Availability section of this document.

DATES:

Applications must state an acceptance period of at least 210 days. Applications will be evaluated in at least two rounds based on the evaluation factors set forth herein. Selections for the first round will be made by March 15, 1999, and awards made by May 14, 1999. The second round of selections and awards will be made between June 1 and August 2, 1999, contingent upon availability of appropriated funds.

SUPPLEMENTARY INFORMATION:

Identification number, authority for issuance, and title:

- a. DE-PS26-99MC40516
- b. The use of Financial Assistance is authorized by 10 C.F.R. 600
- c. Title of Financial Assistance: "Climate Change Fuel Cell Program"
- d. Type of award instrument: Grant
- e. Catalog of Federal Domestic Assistance: 81.089
- f. Expected Duration of Support: Forty-five months
- g. Statutory Authority: P.L. 95-224 (as codified at 31 U.S.C. 6301-6306)

SUBMISSION, WITHDRAWAL, AND UNSUCCESSFUL APPLICATIONS:

1. The Application/Information Package includes application forms to be submitted and other information needed for preparation of applications. The Application/Information Package will be available on the Internet [<http://www.fetc.doe.gov/business/solicit/index.html>] after November 20, 1998. If Internet access is not available, a 3.5" diskette in WordPerfect, version 6.1 may be requested from the contract specialist referenced below by mail or by Fax (304/285-4683).

2. Applications are to be submitted to the following address:

U.S. Department of Energy
Federal Energy Technology Center
Attn: Michael P. Nolan
P.O. Box 880
3610 Collins Ferry Road
Morgantown, WV 26507-0880

Mark the outside package of each application with the solicitation number: DE-PS26-99FT40516.

3. Applications may be withdrawn by the offeror at any time prior to award by written notice to the individual identified in item two above.

4. Unsuccessful applications will be retained by the receiving office and will not be returned to unsuccessful applicants. Unsuccessful applicants will be given an opportunity for a debriefing which will describe the evaluation process and discuss the major strengths and weaknesses found in their application.

FUNDING AVAILABILITY:

The amount of money available for awards is approximately \$4,200,000. Grant values will be \$1,000/kW, provided that the grant shall not exceed a third of the total project costs (unit cost, delivery, installation, and one year of precommercial operation).

Funds are not presently available for this contract. The Government's obligation under this contract is contingent upon the availability of appropriated funds from which payment for contract purposes can be made. No legal liability on the part of the Government for any payment may

arise until funds are made available to the Contracting Officer for this contract and until the Contractor receives notice of such availability, to be confirmed in writing by the Contracting Officer.

SOLICITATION ROUNDS:

Proposals are due on January 15, 1999, for Round 1 and April 1, 1999, for Round 2. Up to one-half of the available government funding is allocated for the first round. Proposers losing on the first round may propose on the second round. Debriefings will take place after the second round of selections and awards. There will be no debriefings after the first round. Awards are projected to be between March 5, 1999 and August 2, 1999 with all project work including one year of operation and final report before September 30, 2003.

APPLICATION PREPARATION INSTRUCTIONS:

a. Applicants who include in their application business sensitive or proprietary data that they do not want disclosed to the public for any purpose or used by the Government except for evaluation purposes shall:

1. Mark the title page with the following legend: "This application or quotation includes business sensitive or proprietary data that shall not be disclosed outside of the Government and shall not be duplicated, used, or disclosed -in whole or in part - for any purpose other than to evaluate this application or quotation. If, however, a grant is awarded to this applicant as a result of - or in connection with - the submission of this data, the government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting grant. This restriction does not limit the Government's right to use information contained in this data if it is

obtained from another source without restriction. The business sensitive or proprietary data subject to this restriction are contained in pages (insert number or other identification of pages)"; and

2. Mark **each page** of data it wishes to restrict with the following legend: "Use or disclosure of data contained on this page is subject to the restriction on the title page of this application or quotation."

b. Each application must be submitted in an **original and six copies** to the address given in the summary section, above, designated as the delivery point for applications.

DOE OBLIGATION FOR APPLICATION PREPARATION:

DOE is under no obligation to reimburse the applicant for any costs associated with the preparation or submission of applications.

APPLICATION EVALUATION AND AWARD:

DOE reserves the right to fund, in whole or in part, any, all, or none of the applications submitted in response to this solicitation.

November 20, 1998

Issue

“Original Signed by”

Randolph R. Cooper, Contracting Officer
Acquisition and Assistance Division

1. General Approach

The DOD through DOE FETC will buy down, with grants, the cost of fuel cell demonstration projects proposed by successful, qualifying applicants. DOE, through the Federal Energy Technology Center, will issue a financial assistance solicitation to provide grants to support the cost of the fuel cell demonstration projects of successful, qualifying applicants proposing demonstrations of fuel cell powered plants. The Federal buy down will not exceed the lower of \$1,000/kW or one-third of the total project costs which includes unit cost, installation, and pre-commercial operation. No power plants purchased before the release dates of this solicitation are eligible for this grant program.

1.1. SOW Summary

The applicant shall form the project team necessary to demonstrate a fuel cell technology. The applicant shall perform the necessary activities to prepare the site, install, and operate the stationary fuel cell power plant.

The applicant shall comply with all NEPA and other regulatory requirements.

1.2. Decision Points

If a proposer cannot furnish FETC a signed purchase order within 60 calendar days of being notified of award, the award is to be terminated without any financial compensation to the proposer.

There will be two decision points for distribution of funds. The first payment to the proposer will be paid after the proposer has furnished FETC with a signed factory acceptance test form. The second payment will be dispersed after receipt of an acceptable final report covering a year's operation of the fuel cell unit.

2. Limits on Participation by Foreign Owned Companies

Acceptable applicants shall not be manufacturers or developers of the fuel cell technology and the power plant must be substantially manufactured in the United States (i.e., at least 50 percent of the value of the components must be produced in the United States and the unit must be assembled in the United States).

3. Special Preparation Instructions for Technical/Cost Proposal

3.1 Special legal requirements:

- 3.1.1 Applicants' chosen fuel cell power plant must be substantially manufactured in the U.S. "Substantially manufactured" is defined as any plant having greater than 50% of the plant value (FOB) DESTINATION MANUFACTURER in the U.S.
- 3.1.2 Priority consideration will be given to projects using DOD installations.
- 3.1.3 Fuel cell projects must be greater than 5-kilowatts.
- 3.1.4 Any fuel cell technology will be eligible.
- 3.1.5 DOE reserves the right to limit the size of fuel cell projects to ensure the best number and distribution of projects.
- 3.1.6 Verification of factory (or site) acceptance test of the fuel cell will be required before the first payment is made to the applicant.
- 3.1.7 Applicant cannot be a fuel cell vendor.
- 3.1.8 The applicant's fuel cell vendor must offer commercial warranties.
- 3.1.9 Projects with near-term operation will receive priority.
- 3.1.10 There are no restrictions on fuel type. Fuel types may include: natural gas, coal gasifier gas, coalbed methane gas, landfill gas, biogas, etc.
- 3.1.11 Allowable Contingencies: The **only** allowable contingency clause in the purchase order to be submitted with the application package is receipt of DOD climate change funding for this effort. If the purchase order contains any other contingencies, the proposal will be considered non-responsive and will not be evaluated further.
- 3.1.12 Decision Points: If a proposer cannot furnish FETC proof of purchase (i.e., signed purchase order) within 60 calendar days of being notified of award, the award will be terminated without any financial compensation to the proposer. The funding will be redirected to other proposals.
- 3.1.13 Reimbursement: There will be two dispersal points for distribution of federal funds.
 - 3.1.13.1 The first payment of 70 percent to the proposer will be dispersed after the proposer has furnished FETC with a signed factory (or site) acceptance test form (8 hours at 95 % of system rated power).
 - 3.1.13.2 The second payment of 30 percent will be dispersed after receipt of an acceptable final report covering a year of operation of the fuel cell unit.

3.2 Solicitation Rounds

Two solicitation "rounds" are currently planned in FY-99 and other rounds may be offered if future funding becomes available. Several organizations (DOE and DOD) will participate on the Technical Evaluation Committee. The Source Selection Official will oversee the activities of the board as well as perform any other duties in the same manner as any other competitive solicitation giving consideration to the evaluation team. As required by Congress, priority will be given to DOD sites.

3.3 Proposal: DOD/DOE is under no obligation to reimburse the applicant for any costs associated with the preparation or submission of applications.

3.3.1 Submittal

Each proposer shall submit an original and six copies to the address below, designated as the delivery point for applications. Mark the outside package of each application with the solicitation number: DE-PS26-99FT40516. Then send the application to:

U.S. Department of Energy
Federal Energy Technology Center
Attn: Michael P. Nolan, M.S. I07
P.O. Box 880
3610 Collins Ferry Road
Morgantown, WV 26507-0880

Proposal acceptance date for first round is January 15, 1999, and April 1, 1999, for the second round.

Applications may be withdrawn by the offeror at any time prior to award by written notice to the contract specialist identified above.

Unsuccessful applications will be retained by the receiving office and will not be returned to unsuccessful applicants. Unsuccessful applicants will be given an opportunity for a debriefing which will describe the evaluation process and discuss the major strengths and weaknesses found in their application.

Business Sensitive/Proprietary Data: Applicants who include in their application business sensitive or proprietary data that they do not want disclosed to the public for any purpose or used by the Government except for evaluation purposes shall:

1. Mark the title page with the following legend: "This application or quotation includes business sensitive or proprietary data that shall not be disclosed outside of the Government and shall not be duplicated, used, or disclosed -in whole or in part - for any purpose other than to evaluate this application or quotation. If, however, a grant is awarded to this applicant as a result of - or in connection with - the submission of this data, the government shall have the right to duplicate, use, or disclose the data to the extent provided in the resulting grant. This restriction does not limit the Government's right to use information contained in this data if it is obtained from another source without restriction. The business sensitive or proprietary data subject to this restriction are contained in pages (insert number or other identification of pages)"; and

2. Mark **each page** of data it wishes to restrict with the following legend: "Use or disclosure of data contained on this page is subject to the restriction on the title page of this application or quotation."

3.3.2 Format: **Warning: The proposal MUST have the following sections in their Proposal Submission Package and be in this order to be evaluated!**

3.3.2.1 Financial Section

3.3.2.1.1 Cost and Financing Table

Activity	Costs (\$'s)	Percent Total Costs (%)
Fuel Cell Units (Number of Units)		??
Fuel Cell Unit Cost (\$/Unit)		??
Total Fuel Cell Plant Cost (Units * Unit Cost) (\$)	0	??
Installation Costs		??
First Year Fuel Cost		??
First Year Maintenance Costs		??
Total Costs (sum of all categories above)	0	0.00%
List of Funding Sources		
1.		??
2.		??
3.		??
4. DOE (Not to exceed one-third plant cost or \$1,000/kW)		??
Total Funding (NOTE must equal cost total above)	0	0.00%
Delta (Total Costs - Total Funding)(should be zero)	0	N.A.

Note: 1. The blue (or shaded cells) have WordPerfect math formulas and do not require data entry, just select: table/formula bar/calculate after entering data.

3.3.2.1.2 Commitment letters: The proposer must supply signed commitment letters from each funding source other than DOD/DOE listed above.

3.3.2.2 Site Information

3.3.2.2.1 Project Schedule: Please provide planned completion date for key milestones for the installation and operation of the fuel cell power plant (FCPP) using the table provided below. Please add any milestones needed for clarification. For those that do not apply, please mark N/A. **Warning:** proposals that fall outside the mandatory completion date of 9/30/2003 are non-responsive and will not be evaluated.

Activity	Planned Completion Date (MM,DD,YYYY)
Send Signed Fuel Cell Purchase Order to FETC	
Site Engineering	
Permitting/Site Preparation	
Delivery of FCPP(s) to Site	
FCPP(s) Installation	
System Start-up, Checkout, Conditioning	
Operation/Maintenance Training	
Onsite Acceptance Test	
First Year Operation, after onsite acceptance test is completed	
Summary Report on First Year Operation	
Miscellaneous specified below:	

3.3.2.2.2 Site Description/Installation Information

Site Description/Installation Information consisting of: fuel description (i.e., natural gas, propane, digester gas, landfill gas, other), intended use of thermal and electrical energy, type of operation (grid connected or grid independent),

Environmental, Safety and Health issues, construction/installation issues and arrangements, firmness of site selection (letter of intent from end user and installation site authority).

Site Description/Installation Information

1. Location of proposed project

Name of Military Base and building, or property

Type of business/application

City: _____ State: _____

Country: _____

2. Category of Installation Site (check one)

☐ DOD - U.S.

☐ DOD - Foreign.

DOD Related

☐ Coast Guard

☐ Post Office

☐ National Guard

☐ Other (specify) _____

☐ Commercial (entirely providing DOD unique support) or Educational/University

☐ Non-DOD - U.S.

☐ Non-DOD - Foreign

3. Thermal Utilization Information (check one)

☐ Unique thermal recovery techniques (specify)

1.

2.

3.

☐ Full thermal recovery

☐ Conventional thermal recovery for some thermal energy

Percent to be used in application

☐ No thermal recovery

Intended use of Thermal Output

☐ Boiler

☐ Domestic heat

☐ Other (specify) _____

4. Type of Fuel

☐ Natural Gas

☐ Propane

☐ Digester Gas

☐ Landfill Gas

☐ Other (specify)

5. Unit/Module Information

Unit Manufacturer: _____

Module Identification: _____

Size of Individual Modules (net kW_e) _____

6. Electrical Output Information

Total electrical output (kW_e, AC/DC): _____

Number of Modules: _____

Operation Mode (check one) ☐ Grid Connect ☐ Grid Independent

Projected minimum base load demand _____

7. Installation Information/Issues

Type of Installation (check one) ☐ Indoor ☐ Outdoor

Site accessibility (describe, list potential issues) _____

This site is in (check one) ☐ Attainment Area for air quality.

☐ Non-Attainment Area for air quality.

Name of area: _____

Installation arrangements (describe, list potential issues) _____

Attach a one page fuel cell product specification/information sheet.

8. Letter/s of intent to participate from the end user (if applicable) and installation site authority.

3.3.2.2.3 NEPA Certification

The undersigned proposer has reviewed the National Environmental Policy Act (NEPA) Input Sheet included in the Application/Information package and certify that the site chosen for this project is consistent with the input sheet. If there are deviations, the proposer must update the NEPA Input Sheet below.

Check One

_____ No Deviations

_____ Deviations:

Certified by Authorized Representative:

Signature

_____ Date

Printed Name

Title

Applicant Organization

3.3.2.2.4 NEPA Input Sheet

NEPA INPUT SHEET

The proposer **must** review, fill out and correct the NEPA input sheet below for their project.

1. Date: September 14, 1998 NEPA #: 947A
2. Activity/Project Title--Contract: 99 Climate Change Buy Down
3. Project/Activity Description: 99 Climate Change Buy Down

The Department of Defense (DOD) and the Department of Energy (DOE) are combining resources to support the 99 Climate Change Buy Down Fuel Cell Program. This program supports the commercialization of stationary fuel cell power plants by U.S. fuel manufacturers and at the same time satisfies DOD goals through stimulation of end-user applications. The proposed work complements and enhances the mission of the Fossil Fuel Program at FETC to promote and develop high efficiency processes for industrial and commercial applications.

The objectives of the 99 Climate Change Buy Down Fuel Cell Program are to reduce greenhouse gas emissions through the efficient use of fossil fuels, to accelerate fuel cell commercialization in the U.S., and to satisfy the DOD goals for the environment, readiness, and economy, through activities which would stimulate end-user applications. Successful offerers will demonstrate, through their applications, an intent to purchase, install, operate, and maintain stationary fuel cell power plant(s).

DOD, through the DOE's Federal Energy Technology Center, will provide grants to support the cost of stationary fuel cell demonstration projects of successful, qualifying applicants proposing demonstrations of US-manufactured fuel cell power plants. These grants will not exceed one-third the cost of the project (including unit cost, delivery, installation, and one year of pre-commercial operation) up to \$1,000 per kilowatt. Purchased units must be greater than 5 kilowatts and projects are anticipated to be between 100 kilowatts and 3 megawatts in size. Awards are projected to be between 3/15/99 and 7/29/99 with project completion anticipated to be before 9/30/03.

3. Brief Description of Affected Environment:

The fuel cell systems are installed at various sites in several states and countries (see table below). It is projected that these units will provide on-site energy in commercial or light industrial, or military installations. As such, these lands are expected to be previously disturbed or occupied. Historically, these units have been placed at airports and hotels where the land is already covered in concrete.

Contractor	Site Address
TBD	TBD (site 1)
TBD	TBD (site 2)

4. Environmental Concerns: Would the project/activity, either during construction or operation, result in changes or disturbances to the following entities? Provide brief explanations to any "yes" answers on an attached page.
- 4.1 Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health requirements of DOE orders?
YES ___ NO x UNKNOWN ___
- 4.2 Siting and construction or major expansion of waste storage, disposal recovery, or treatment facilities?
YES ___ NO x UNKNOWN ___
- 4.3 Uncontrolled or unpermitted releases resulting from hazardous substances, pollutants or CERCLA-excluded petroleum and natural gas products that preexist in the environment?
YES ___ NO x UNKNOWN ___
- 4.4 Adversely affect environmentally sensitive resources, including:
- a) Threatened/Endangered Species or Critical Habitat Areas YES ___ NO x UNKNOWN ___
- b) Flood Plains/Wetlands YES ___ NO x UNKNOWN ___
- c) Archaeological/Cultural Resources YES ___ NO x UNKNOWN ___
- d) Prime, Unique or Important Farmland YES ___ NO x UNKNOWN ___
- e) Special sources of Groundwater (sole source aquifer, etc.) YES ___ NO x UNKNOWN ___
- f) Tundra, Coral Reefs, Rain Forests, Coastal Zones YES ___ NO x UNKNOWN ___
- g) National Parks, Wild and Scenic Rivers, Waters of the State, etc. YES ___ NO x UNKNOWN ___
- 4.5 Emit any of the Clean Air Act Criteria Pollutants (sulfur dioxide, nitrogen oxides, carbon monoxide, ozone, particulates (PM₁₀) lead, volatile organic compounds (VOCs))?
YES ___ NO x UNKNOWN ___
5. ADDITIONAL INFORMATION (Provide brief explanations of any "YES" answers on

an attached sheet.) Would the project/activity ...

- 5.1 Affect water use and quality, including sedimentation, and discharge of point/nonpoint source pollutants to surface or groundwater?
YES ☐ NO ☒ UNKNOWN ☐
- 5.2 Control or modify the waters, streambed, or shoreline of any stream or water body?
YES ☐ NO ☒ UNKNOWN ☐
- 5.3 Result in the generation, transportation, and disposal of any hazardous or toxic materials as defined by Federal or applicable state regulations?
YES ☐ NO ☒ UNKNOWN ☐
- 5.4 Affect any aspect of the human environment besides those mentioned above either directly or indirectly (e.g., visibility, noise, aesthetic and socioeconomic impacts; public facilities and services or exposure to toxic and hazardous material)?
YES ☐ NO ☒ UNKNOWN ☐
- 5.5 Generate public controversy? YES ☐ NO ☒ UNKNOWN ☐

5.6 Cumulative Impacts:

The planned operation period of the fuel cell systems is one year. Therefore, no cumulative impacts are predicted.

5.7 Pollution Prevention:

Fuel cells used in stationary power plant applications have significant potential to reduce greenhouse gas emissions. The major greenhouse gases include carbon dioxide, methane, nitrous oxides and hydro fluorocarbons. Carbon dioxide from fossil energy production and use is the largest contributor to greenhouse gases. Because of the high efficiency and electrochemical (non-combustion) nature of the fuel cell, fuel cell power plant emissions of greenhouse gases are quite low, an order of magnitude or more below those of conventional fossil-fuel power plants typically supplying power to the proposed sites. Therefore, significant reductions in emissions should result.

3.4 Final Report:

At a minimum, the final report shall contain at least the sections listed below. The submission format shall be in a hard copy and the information submitted on a 1.44 computer disk.

3.4.1 Title Page (containing the following information):

Report Title, Type of Report (i.e., "Final Report")

Reporting Period (period of operation)

Principal Author(s)

Date (month & year) Report Completed

DOE Award Number (i.e., "DE-FG26-99FTxxxxx") where x is the last five digits from the contract number

Name of Submitting Organization/Company

3.4.2 Disclaimer (must follow the title page and contain the following paragraph):

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacture, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof.

3.4.3 Abstract

3.4.4 Table of Contents

3.4.5 Executive Summary (paragraph)

3.4.6 Introduction (paragraph)

3.4.7 Results and Discussion (must discuss the following items):

3.4.7.1 Mean Time Between Failure (MTBF)

3.4.7.2 Cost Benefit Analysis

3.4.7.3 Reliability

3.4.7.4 Thermal Output

3.4.7.5 Certify that the activity has been completed.

3.4.8 8" x 10" Glossy Picture (or electronic picture file (i.e., bmp, tif, pic)) of the fuel cell system.

3.4.9 Conclusions

3.5 Milestone Schedule Plan (DOE F1332.2)

This section documents the planned project schedule in the standard DOE format (DOE F 1332.2). It includes a summary sheet showing all tasks/elements identified in the Work Breakdown Structure(WBS) on a single form, and for complex efforts, a separate sheet for each task/element which gives more detail. The planned events and milestones for each task/element are included. The standard symbols and charting conventions described on the reverse side of the form are used. The summary sheet includes a line labeled “administration,” and denotes events such as subcontract awards, project reviews, etc. An associated milestone log provides a narrative description of events and anticipated dates of initiation/completion.

3.6 Milestone Schedule/Status Report (DOE F 1332.3)

This report shows the completion status of the activities and events that are shown on the Milestone Schedule Plan. The report also shows changes to the planned schedule. Like the Milestone Schedule/Plan, information is reported by WBS element. DOE Form 1332.2 is used for reporting schedule status.

4.1 Evaluation Procedures

The Project and Cost Applications will be evaluated separately in accordance with 10 CFR Part 600 Financial Assistance Rules, the evaluation criteria in the solicitation, and this Selection/Rating Plan.

A common understanding of what constitutes outstanding, good, satisfactory, poor and unsatisfactory ratings was developed by the Technical Evaluation Committee (TEC). An outline for what constitutes these ratings for each criterion is specified in 4.4.

4.2 Evaluation of Project Applications

The Project Application evaluation will be conducted using numerical ratings to determine the relative merits of an application in accordance with the project evaluation criteria. Each application will be rated by the individual TEC members. The committee will discuss each rating for each criterion for each application. Strengths and weaknesses will be identified.

The project criteria and weighting factors are as follows:

1. Firmness of Financial Commitment **Weighting Factor of 40**

Firmness of the applicant's proposed funding sources for the project.

2. Site Information **Weighting Factor of 20**

Extent to which applicant intends to use thermal and electrical energy, type of operation (grid connected or grid independent), soundness of Environmental, Safety and Health issues and construction/installation issues and arrangements, and firmness of site selection (letter of intent from end user and installation site authority).

3. DOD Relationship **Weighting Factor of 20**

The applicant project plans installation at an education institution/university or at a commercial institution that primarily supports DOD's mission.

Order of precedence for siting is DOD installation, DOD-related installation (Coast Guard, Post Offices, VA Hospitals, etc.), educational/university institution or a commercial institution that primarily supports DOD's mission, a non-DOD installation in the United States, and a non-DOD installation in a foreign country.

4. Uniqueness of Project **Weighting Factor of 20**

Extent to which applicant intends to utilize novel fuels and electrical/thermal interfaces for heat recovery to utilize all the thermal energy available from the fuel cell system.

4.3 Program Policy Factors

It is desirable to select for award a group of projects representing diverse sizes, applications, fuels, and locations.

5. Property Management and Disposition

5.1 Government-Furnished Property and Data. The Government is not obligated to furnish any real or personal property under this grant.

STANDARD FORMS

Standard Form 424: Application for Federal Assistance

FETC Form F 4220.38: FETC Assurance, Non-Construction Programs

FETC Form F 4220.35: Additional Representations and Certifications for Federal Financial Assistance

Standard Form 424B: Assurances - Non-Construction Programs

Standard Form LLL: Disclosure of Lobbying Activities

DOE F 1600.5: Assurances of Compliance - Nondiscrimination in Federally Assisted Programs

FETC F 540.3-1: Federal Assistance Reporting Checklist

APPLICATION FOR
FEDERAL ASSISTANCE

1. TYPE OF SUBMISSION: <i>Application</i> <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		2. DATE SUBMITTED		Applicant Identifier	
		3. DATE RECEIVED BY STATE		State Application Identifier	
<i>Preapplication</i> <input type="checkbox"/> Construction <input type="checkbox"/> Non-Construction		4. DATE RECEIVED BY FEDERAL AGENCY		Federal Identifier	

5. APPLICANT INFORMATION	
Legal Name:	Organizational Unit:
Address (give city, county, state, and zip code):	Name and telephone number of the person to be contacted on matters involving this application (give area code)
6. EMPLOYER IDENTIFICATION NUMBER (EIN): <div style="text-align: center;"> <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> </div>	7. TYPE OF APPLICANT: (enter appropriate letter in box) <input type="checkbox"/> <div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> A. State B. County C. Municipal D. Township E. Interstate F. Intermunicipal G. Special District </div> <div style="width: 50%;"> H. Independent School Dist. I. State Controlled Institution of Higher Learning J. Private University K. Indian Tribe L. Individual M. Profit Organization N. Other (Specify): _____ </div> </div>
8. TYPE OF APPLICATION: <input type="checkbox"/> New <input type="checkbox"/> Continuation <input type="checkbox"/> Revision If Revision, enter appropriate letter(s) in box(es): <input type="checkbox"/> <input type="checkbox"/> <div style="display: flex; justify-content: space-between;"> <div>A. Increase Award</div> <div>B. Decrease Award</div> <div>C. Increase Duration</div> </div> <div style="display: flex; justify-content: space-between;"> <div>D. Decrease Duration</div> <div>Other (specify): _____</div> </div>	9. NAME OF FEDERAL AGENCY:
ASSISTANCE NUMBER: <input type="text"/> <input type="text"/> - <input type="text"/> <input type="text"/> <input type="text"/> 10. CATALOG OF FEDERAL DOMESTIC TITLE:	11. DESCRIPTIVE TITLE OF APPLICANT'S PROJECT:
12. AREAS AFFECTED BY PROJECT (cities, counties, states, etc.):	

13. PROPOSED PROJECT:		14. CONGRESSIONAL DISTRICTS OF:	
Start Date	Ending Date	a. Applicant	b. Project

15. ESTIMATED FUNDING:		16. IS APPLICATION SUBJECT TO REVIEW BY STATE EXECUTIVE ORDER 12372 PROCESS?	
a. Federal	\$	a. YES. THIS PREAPPLICATION/APPLICATION WAS MADE AVAILABLE TO THE STATE EXECUTIVE ORDER 12372 PROCESS FOR REVIEW ON: DATE _____	
b. Applicant	\$	b. NO. <input type="checkbox"/> PROGRAM IS NOT COVERED BY E.O. 12372 <input type="checkbox"/> OR PROGRAM HAS NOT BEEN SELECTED BY STATE FOR REVIEW	
c. State	\$		
d. Local	\$		
e. Other	\$		
f. Program Income	\$		
g. TOTAL	\$	17. IS THE APPLICANT DELINQUENT ON ANY FEDERAL DEBT? <input type="checkbox"/> Yes If "Yes," attach an explanation <input type="checkbox"/> No	

18. TO THE BEST OF MY KNOWLEDGE AND BELIEF, ALL DATA IN THIS APPLICATION/PREAPPLICATION ARE TRUE AND CORRECT. THE DOCUMENT HAS BEEN DULY AUTHORIZED BY THE GOVERNING BODY OF THE APPLICANT AND THE APPLICANT WILL COMPLY WITH THE ATTACHED ASSURANCES IF THE ASSISTANCE IS AWARDED.		
a. Typed Name of Authorized Representative	b. Title	c. Telephone number
d. Signature of Authorized Representative		e. Date Signed

INSTRUCTIONS FOR THE SF 424

This is a standard form used by applicants as a required facesheet for preapplications and applications submitted for Federal assistance. It will be used by Federal agencies to obtain applicant certification that States which have established a review and comment procedure in response to Executive Order 12372 and have selected the program to be included in their process, have been given an opportunity to review the applicant's submission.

- | Item: | Entry: | Item: | Entry: |
|-------|--|-------|--|
| 1. | Self-explanatory. | 12. | List only the largest political entities affected (e.g., State, counties, cities). |
| 2. | Date application submitted to Federal agency (or State if applicable) & applicant's control number (if applicable). | 13. | Self-explanatory. |
| 3. | State use only (if applicable). | 14. | List the applicant's Congressional District and any District(s) affected by the program or project. |
| 4. | If this application is to continue or revise an existing award, enter present Federal identifier number. If for a new project, leave blank. | 15. | Amount requested or to be contributed during the first funding/budget period by each contributor. Value of in-kind contributions should be included on appropriate lines as applicable. If the action will result in a dollar change to an existing award, indicate <i>only</i> the amount of the change. For decreases, enclose the amounts in parentheses. If both basic and supplemental amounts are included, show breakdown on an attached sheet. For multiple program funding, use totals and show breakdown using same categories as item 15. |
| 5. | Legal name of applicant, name of primary organizational unit which will undertake the assistance activity, complete address of the applicant, and name and telephone number of the person to contact on matters related to this application. | | |
| 6. | Enter Employer Identification Number (EIN) as assigned by the Internal Revenue Service. | | Applicants should contact the State Single Point of Contact (SPOC) for Federal Executive Order 12372 to determine whether the application is subject to the State intergovernmental review process. |
| 7. | Enter the appropriate letter in the space provided. | 16. | |
| 8. | Check appropriate box and enter appropriate letter(s) in the space(s) provided:

— "New" means a new assistance award.

— "Continuation" means an extension for an additional funding/budget period for a project with a projected completion date.

— "Revision" means any change in the Federal Government's financial obligation or contingent liability from an existing obligation. | 17. | This question applies to the applicant organization, not the person who signs as the authorized representative. Categories of debt include delinquent audit disallowances, loans and taxes. |
| 9. | Name of Federal agency from which assistance is being requested with this application. | 18. | To be signed by the authorized representative of the applicant. A copy of the governing body's authorization for you to sign this application as official representative must be on file in the applicant's office. (Certain Federal agencies may require that this authorization be submitted as part of this application.) |
| 10. | Use the Catalog of Federal Domestic Assistance number and title of the program under which assistance is requested. | | |
| 11. | Enter a brief descriptive title of the project, if more than one program is involved, you should append an explanation on a separate sheet. If appropriate (e.g., construction or real property projects), attach a map showing project location. For preapplications, use a separate sheet to provide a summary description of this project. | | |

Federal Energy Technology Center

FETC ASSURANCE, NON-CONSTRUCTION PROGRAMS

Identify and complete the assurances, representations, and certifications below that are applicable to your project or program. Questions or comments should be addressed to the awarding agency.

- ___ Standard Form 424B# "Assurances - Non-Construction Programs"
- ___ FETC F 4220.35# "Additional Representations and Certifications for Federal Financial Assistance"
- ___ Standard Form LLL # "Disclosure of Lobbying Activities"
- ___ DOE F 1600.5 # "U. S. Department of Energy Assurance of Compliance Nondiscrimination in Federally Assisted Programs, OMB Burden Disclosure"

Applicant Certification

The Applicant certifies that it has complied, or that, within 90 days of the date of the grant or cooperative agreement, it will comply with all applicable requirements referenced herein, including those of 10 C.F.R. § 1040.5 (a copy will be furnished to the Applicant upon written request to DOE).

To the best of its current knowledge and belief, the applicant represents that the information provided is current, accurate, and complete and will advise DOE of any changes prior to award.

Designated Responsible Employee

Name and Title (Printed or Typed)

() _____
Telephone Number

Signature

Date

Applicant's Name

() _____
Telephone Number

Address

Date

Authorized Official:

**President, Chief Executive Officer
or Authorized Designee**

Name and Title (Printed or Typed)

() _____
Telephone Number

Signature

Date

U.S. DEPARTMENT OF ENERGY
Federal Energy Technology Center

**ADDITIONAL REPRESENTATIONS AND CERTIFICATIONS
FOR FEDERAL FINANCIAL ASSISTANCE**

19. CERTIFICATION REGARDING A DRUG-FREE WORKPLACE

This certification is required by the Drug-Free Workplace Act of 1988 (Pub.L. 100-690, Title V, Subtitle D) and is implemented through additions to the Debarment and Suspension regulations, published in the Federal Register on January 31, 1989, and May 25, 1990.

ALTERNATE I (GRANTEES OTHER THAN INDIVIDUALS)

- (1) The grantee certifies that it will or will not continue to provide a drug-free workplace by:
- (a) Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the grantee's workplace and specifying the actions that will be taken against employees for violation of such prohibition;
 - (b) Establishing an ongoing drug-free awareness program to inform employees about:
 - (1) The dangers of drug abuse in the workplace;
 - (2) The grantee's policy of maintaining a drug-free workplace;
 - (3) Any available drug counseling, rehabilitation, and employee assistance programs; and
 - (4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace;
 - (c) Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph (a);
 - (d) Notifying the employee in the statement required by paragraph (a) that, as a condition of employment under the grant, the employee will:
 - (1) Abide by the terms of the statement; and
 - (2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace not later than five calendar days after such conviction;
 - (e) Notifying the agency, in writing, within ten calendar days after receiving notice under subparagraph (d)(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer or other designee on whose grant activity the convicted employee was working, unless the Federal agency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;
 - (f) Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph (d)(2), with respect to any employee who is so convicted:
 - (1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with requirements of the Rehabilitation Act of 1973, as amended; or
 - (2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State or local health, law enforcement, or other appropriate agency;
 - (g) Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs (a),(b),(c),(d),(e), and (f).
- (2) The grantee may insert in the space provided below the site(s) for the performance of work done in connection with the specific grant:

Place of Performance: (Street address, city, county, state, zip code)

___ Check if there are workplaces on file that are not identified here.

ALTERNATE II (GRANTEES WHO ARE INDIVIDUALS)

- (1) The grantee certifies that, as a condition of the grant, he or she will not engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance in conducting any activity with the grant.
- (2) If convicted of a criminal drug offense resulting from a violation occurring during the conduct of any grant activity, he or she will report the conviction, in writing, within 10 calendar days of the conviction, to every grant officer or other designee, unless the Federal agency designates a central point for the receipt of such notices. When notice is made to such a central point, it shall include the identification number(s) of each affected grant.

20. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, AND OTHER RESPONSIBILITY MATTERS (35 CFR Part 85)

- (1) The prospective primary participant certifies to the best of its knowledge and belief, that it and its principals:
 - (a) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from covered transactions by any Federal department or agency;
 - (b) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;
 - (c) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (1)(b) of this certification; and
 - (d) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.
- (2) Where the prospective primary participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

21. LOBBYING (34 CFR Part 82)

The undersigned certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, Title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

22. TAXPAYER IDENTIFICATION (MAR 1994) (FAR 52.204-3)

- (a) Definitions:

Common parent, as used in this solicitation provision, means that corporate entity that owns or controls an affiliated group of corporations that files its Federal income tax returns on a consolidated basis, and of which the offeror is a member.

Corporate status, as used in this solicitation provision, means a designation as to whether the offeror is a corporate entity, an unincorporated entity (e.g., sole proprietorship or partnership), or a corporation providing medical and health care services.

Taxpayer Identification Number (TIN), as used in this solicitation provision, means the number required by the IRS to be used by the offeror in reporting income tax and other returns.

- (b) All offerors are required to submit the information required in paragraphs (c) through (e) of this solicitation provision in order to comply with reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M and implementing regulations issued by the Internal Revenue Service (IRS). If the resulting contract is subject to reporting requirements described in FAR 4.903, the failure or refusal by the offeror to furnish the information may result in a 31 percent reduction of payments otherwise due under the contract.
- (c) Taxpayer Identification Number (TIN).
 - () TIN: _____.
 - () TIN has been applied for.
 - () TIN is not required because:

- ☐ Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the U.S. and does not have an office or place of business or a fiscal paying agent in the U.S.;
- ☐ Offeror is an agency or instrumentality of a foreign government;
- ☐ Offeror is an agency or instrumentality of a Federal, state or local government;
- ☐ Other. State basis. _____

(d) Corporate Status.

- ☐ Corporation providing medical and health care services, or engaged in the billing and collecting of payments for such services;
- ☐ Other corporate entity;
- ☐ Not a corporate entity;
- ☐ Sole proprietorship
- ☐ Partnership
- ☐ Hospital or extended care facility described in 26 CFR 501(c)(3) that is exempt from taxation under 26 CFR 501(a).

(e) Common Parent.

- ☐ Offeror is not owned or controlled by a common parent as defined in paragraph (a) of this clause.
- ☐ Name and TIN of common parent:
- Name _____
- TIN _____

23. **REPRESENTATIONS OF LIMITED RIGHTS DATA AND RESTRICTED COMPUTER SOFTWARE (JUN 1987)**
(FAR 52.227-15) (Note: "Contract" means any grant or cooperative agreement or other financial assistance instrument.)

- (a) This solicitation sets forth the work to be performed if a contract award results, and the Government's known delivery requirements for data (as defined in FAR 27.401). Any resulting contract may also provide the Government the option to order additional data under the Additional Data Requirements clause at 52.227-16 of the FAR, if included in the contract. Any data delivered under the resulting contract will be subject to the Rights in Data - General clause at 52.227-14 that is to be included in this contract. Under the latter clause, a Contractor may withhold from delivery data that qualify as limited rights data or restricted computer software, and deliver form, fit, and function data in lieu thereof. The latter clause also may be used with its Alternates II and/or III to obtain delivery of limited rights data or restricted computer software, marked with limited rights or restricted rights notices, as appropriate. In addition, use of Alternate V with this latter clause provides the Government the right to inspect such data at the Contractor's facility.
- (b) As an aid in determining the Government's need to include any of the aforementioned Alternates in the clause at 52.227-14, Rights in Data - General, the offeror's response to this solicitation shall, to the extent feasible, complete the representation in paragraph (b) of this provision to either state that none of the data qualify as limited rights data or restricted computer software, or identify which of the data qualifies as limited rights data or restricted computer software. Any identification of limited rights data or restricted computer software in the offeror's response is not determinative of the status of such data should a contract be awarded to the offeror.

REPRESENTATION CONCERNING DATA RIGHTS

Offeror has reviewed the requirements for the delivery of data or software and states (offeror check appropriate block)

- ☐ None of the data proposed for fulfilling such requirements qualifies as limited rights data or restricted computer software.
- ☐ Data proposed for fulfilling such requirements qualify as limited rights data or restricted computer software and are identified as follows:

Note: Limited rights data and Restricted computer software are defined in the contract clause entitled "Rights In Data - General"

24. EPACT REPRESENTATION (Applicability: Grants, Subgrants and Cooperative Agreements of “Covered” Programs under Title XX-XXIII for For-Profit Business)

Section 2306 of the Energy Policy Act of 1992, Pub. L. 102-486 establishes eligibility requirements for companies to participate in certain financial assistance programs covered under Titles XX through XXIII of the EPAct. For this purpose, "company" means any business entity other than an organization of the type described in section 501(c)(3) of the Internal Revenue Code of 1954 [26 U.S.C. Section 501(c)(3)].

In order for the Department of Energy (DOE) to make an award to a company under a covered program, DOE must determine that the company's participation will be in the economic interest of the United States and, if the company is not a United States-owned company, that the parent company is incorporated in a foreign country that: affords national treatment to United States-owned companies with regard to access to Government-supported joint ventures in energy research and development; affords national treatment to United States-owned companies with regard to general investment opportunities; and affords protection to intellectual property rights owned by United States-owned companies. To assist DOE in making these determinations, the applicant must answer the following questions and make the representation provided therein. In the event the information submitted is inadequate for DOE to make a determination, DOE will request such additional information as may be required.

Company Ownership Information:
(Include this information for each participant in a joint venture.)

1.

Is your company a United States-owned company? Yes___ No___
(U.S.-owned company means (1) a company that has majority ownership by individuals who are citizens of the United States, or (2) a company organized under the laws of a State that either has no parent company or has a parent company organized under the laws of a State.)
2.

If no, identify the place in which the parent company is incorporated or organized.

Economic Interest Information:

1.

Will this project result in investments in the U.S. in research and development? Yes___ No___
If the answer is yes, what percentage of the total estimated cost of the project will be expended in the U.S.? (Contractor and supplier costs are to be included in total estimated costs.) Also, express in terms of dollars. _____% ---- \$_____
2.

Will this project result in investments in U.S. in manufacturing? Yes___ No___
If the answer is yes, what percentage of the total estimated cost of the project including contractor and supplier costs will be expended in U.S. manufacturing? Also, express in terms of dollars. _____% ---- \$_____
3.

Will this project contribute to U.S. employment? Yes___ No___
If the answer is yes, briefly describe how.

4.

Does the applicant agree that it will promote the manufacture within the U.S. of products resulting from any resultant technology and competitively procure parts and materials? Yes___ No___

Briefly describe plans, if any, for any manufacturing of products arising from the program supported research and development, including the location where such manufacturing is expected to occur.

If your answer is no, please explain.

5. What other benefits to the U.S. will result from this project?

ASSURANCES - NON-CONSTRUCTION PROGRAMS

OMB Approval No. 0348-0040

Public reporting burden for this collection of information is estimated to average 15 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0040), Washington, DC 20503.
PLEASE DO NOT RETURN YOUR COMPLETED FORM TO THE OFFICE OF MANAGEMENT AND BUDGET, SEND IT TO THE ADDRESS PROVIDED BY THE SPONSORING AGENCY.

Note: Certain of these assurances may not be applicable to your project or program. If you have questions, please contact the awarding agency. Further, certain Federal awarding agencies may require applicants to certify to additional assurances. If such is the case, you will be notified.

As the duly authorized representative of the applicant I certify that the applicant:
(Insert Name of Proposer): _____

1. Has the legal authority to apply for Federal assistance, and the institutional, managerial and financial capability (including funds sufficient to pay the non-Federal share of project cost) to ensure proper planning, management and completion of the project described in this application.
2. Will give the awarding agency, the Comptroller General of the United States, and if appropriate, the State, through any authorized representative, access to and the right to examine all records, books, papers, or documents related to the award, and will establish a proper accounting system in accordance with generally accepted accounting standards or agency directives.
3. Will establish safeguards to prohibit employees from using their positions for a purpose that constitutes or presents the appearance of personal or organizational conflict of interest, or personal gain.
4. Will initiate and complete the work within the applicable time frame after receipt of approval of the awarding agency.
5. Will comply with the Intergovernmental Personnel Act of 1970 (42 U.S.C. §§4728-4763) relating to prescribed standards for merit systems for programs funded under one of the nineteen statutes or regulations specified in Appendix A of O.P.M.'s Standards for a Merit System of Personnel Administration (5 C.F.R. 900, Subpart F).
6. Will comply with all Federal statutes relating to nondiscrimination. These include but are not limited to: (a) Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin; (b) Title IX of the Education Amendments of 1972, as amended (20 U.S.C. §§1681-1683, and 1685-1686), which prohibits discrimination on the basis of sex; (c) Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. §794), which prohibits discrimination on the basis of handicaps; (d) the Age Discrimination Act of 1975, as amended (42 U.S.C. §§6101-6107), which prohibits discrimination on the basis of age; (e) the Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse; (f) The Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism; (g) §§523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records; (h) Title VIII of the Civil Rights Act of 1968 (42 U.S.C. 33601 et seq.), as amended, relating to non discrimination in the sale, rental, or financing of housing; (i) any other nondiscrimination provisions in the specific statute(s) under which application for Federal assistance is being made; and (j) the requirements of any other nondiscrimination statute(s) which may apply to the application.
7. Will comply, or has already complied, with the requirements of Titles II and III of the Uniform Relocation Assistance Policies Act of 1970 (P.L. 91-646, which provide for fair and equitable treatment of persons displaced or whose property is acquired as a result of Federal or federally assisted programs. These requirements apply to all interests in real property acquired for project purposes regardless of Federal participation in purchases.
8. Will comply with the provisions of the Hatch Act (5 U.S.C. §§1501-1508 and 7324-7328) which limit the political activities of employees whose principal employment activities are funded in whole or in part with Federal funds.
9. Will comply, as applicable, with the provisions of the Davis-Bacon Act (40 U.S.C. §§276a to 276a-7), the Copeland Act (40 U.S.C. §276c and 18 U.S.C. §§874), and the Contract Work Hours and Safety Standards Act (40 U.S.C. §§327-333), regarding labor standards for federally assisted construction subagreements.
10. Will comply, if applicable, with flood insurance purchase requirements of Section 102(a) of the Flood Disaster Protection Act of 1973 (P.L. 93-234) which requires recipients in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is \$10,000 or more.
11. Will comply with environmental standards which may be prescribed pursuant to the following: (a) institution of environmental quality control measures under the National Environmental Policy Act of 1969 (P.L. 91-190) and Executive Order (EO) 11514; (b) notification of violating facilities pursuant to EO 11738; (c) protection of wetlands pursuant to EO 11990; (d) evaluation of flood hazards in floodplains in accordance with EO 11988; (e) assurance of project consistency with the approved State Management Program developed under the Coastal Zone Management Act of 1972 (16 U.S.C. §§1451 et seq.); (f) conformity of Federal actions to State (Clear Air) Implementation Plans under Section 176(c) of the Clean Air Act of 1955, as amended (42 U.S.C. §7401 et seq.); (g) protection of underground sources of drinking water under the Safe Drinking Water Act of 1974, as amended, (P.L. 93-523); and (h) protection of endangered species under the Endangered Species Act of 1973, as amended, (P.L. 93-205).
12. Will comply with the Wild and Scenic Rivers Act of 1968 (16 U.S.C. §§1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers systems.
13. Will assist the awarding agency in assuring compliance with Section 106 of the National Historic Preservation Act of 1966, as amended (16 U.S.C. 470), EO 11593 (identification and protection of historic properties), and the Archaeological and Historic Preservation Act of 1974 (16 U.S.C. 469a-1 et seq.).
14. Will comply with P.L. 93-348 regarding the protection of human subjects involved in research, development, and related activities supported by this award of assistance.
15. Will comply with the Laboratory Animal Welfare Act of 1966 (P.L. 89-544, as amended, 7 U.S.C. 2131 et seq.) pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.
16. Will comply with the Lead-Based Paint Poisoning Prevention Act (42 U.S.C. 4801 et seq.) which prohibits the use of lead based paint in construction or rehabilitation of residence structures.
17. Will cause to be performed the required financial and compliance audits in accordance with the Single Audit Act of 1984, or OMB Circular No. A-133, Audits of Institutions of Higher Learning and other Non-profit Institutions.
18. Will comply with all applicable requirements of all other Federal laws, executive orders, regulations and policies governing this program.

DISCLOSURE OF LOBBYING ACTIVITIES

Approved by OMB
0348-0046

Complete this form to disclose lobbying activities pursuant to 31 U.S.C. 1352
(See reverse for public burden disclosure.)

1. Type of Federal Action: <input type="checkbox"/> a. contract b. grant c. cooperative agreement d. loan e. loan agreement f. loan insurance		2. Status of Federal Action: <input type="checkbox"/> a. bid/offer/application b. initial award c. post-award	3. Report Type: <input type="checkbox"/> a. initial filing b. material change For Material Change Only: year _____ quarter _____ date of last report _____
4. Name and Address of Reporting Entity: <input type="checkbox"/> Prime <input type="checkbox"/> Subawardee Tier ____, if known: Congressional District, if known:		5. If Reporting Entity in No. 4 is Subawardee, Enter Name and Address of Prime: Congressional District, if known:	
6. Federal Department/Agency:		7. Federal Program Name/Description: CFDA Number, if applicable: _____	
8. Federal Action Number, if known:		9. Award Amount, if known: \$	
10. a. Name and Address of Lobbying Registrant (if individual, last name, first name, MI):		b. Individuals Performing Services (including address if different from No. 10a) (last name, first name, MI):	
11. Information requested through this form is authorized by Title 31 U.S.C. Section 1352. This disclosure of lobbying activities is a material representation of fact upon which reliance was placed by the tier above when this transaction was made or entered into. This disclosure is required pursuant in 31 U.S.C. 1352. This information will be reported to the Congress semi-annually and will be available for public inspection. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.		Signature: Print Name: Title: Telephone No.: _____ Date: _____	
Federal Use Only:		Authorized for Local Reproduction Standard Form - LLL#	

INSTRUCTIONS FOR COMPLETION OF SF-LLL, DISCLOSURE OF LOBBYING ACTIVITIES

This disclosure form shall be completed by the reporting entity, whether subawardee or prime Federal recipient, at the initiation or receipt of a covered Federal action, or a material change to a previous filing, pursuant to Title 31 U.S.C. Section 1352. The filing of a form is required for each payment or agreement to make payment to any lobbying entity for influencing or attempting to influence an officer or employee of any agency, a Member of connection with a covered Federal action. Complete all items that apply for both the initial filing and material change report. Refer to the implementing guidance published by the Office of Management and Budget for additional information.

1. Identify the type of covered Federal action for which lobbying activity is and/or has been secured to influence the outcome of a covered Federal action.
2. Identify the status of the covered Federal action.
3. Identify the appropriate classification of this report. If this is a follow-up report caused by a material change to the information previously reported, enter the year and quarter in which the change occurred. Enter the date of the last previously submitted report by this reporting entity for this covered Federal action.
4. Enter the full name, address, city, state, and zip code of the reporting entity. Include Congressional District, if known. Check the appropriate classification of the reporting entity that designates if it is , or expect to be, a prime or subaward recipient. Identify the tier of the subawardee, e.g., the first subawardee of the prime is the 1st tier. Subawards include but are not limited to subcontracts, subgrants, and contract awards under grants.
5. If the organization filing the report in Item 4 checks "Subawardee," then enter the full name, address, city, state, and zip code of the prime Federal recipient. Include Congressional District, if known.
6. Enter the name of the Federal agency making the award or loan commitment. Include at least one organizational level below agency name, if known. For example, Department of Transportation, United States Coast Guard.
7. Enter the Federal program name or description for the covered Federal action (Item 1). If known, enter the full Catalog of Federal Domestic Assistance (CFDA) number for grants, cooperative agreements, loans, and loan commitments.
8. Enter the most appropriate Federal identifying number available for the Federal action identified in Item 1 (e.g., Request for Proposal (RFP) number; Invitation for Bid (IFB) number; grant announcement number; the contract, grant, or loan award number; the application/proposal control number assigned by the Federal agency). Include prefixes, e.g., "RFP-DE-90-001."
9. For a covered Federal action where there has been an award or loan commitment by the Federal agency, enter the Federal amount of the award/loan commitment for the prime entity identified in Item 4 or 5.
10.
 - (a) Enter the full name, address, city, state, and zip code of the Registrant under the Lobbying Disclosure Act of 1995 engaged by the reporting entity identified in Item 4 to influence the covered Federal action.
 - (b) Enter the full names of the individual(s) performing services, and include full address if different from 10.(a). Enter Last Name, First Name, and Middle Initial (MI).
11. The certifying official shall sign and date the form, print his/her name, title, and telephone number.

Public reporting burden for the collection of information is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or any other aspect of this collection of information, including suggestions for reducing the burden, to the Office of Management and Budget, Paperwork Reduction Project (0348-0046), Washington, D.C. 20503.

DOE F 1600.5#

(6-94)

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U.S. Department of Energy
Assurance of Compliance
Nondiscrimination in Federally Assisted Programs

OMB NO.

1910-0400

OMB Burden Disclosure Statement

Public reporting for this collection of information is estimated to average 15 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Office of Information Resources Management Policy, Plans, and Oversight; Records Management Division, HR-422-GTN, Paperwork Reduction Project (1910-0400), U.S. Department of Energy, 1000 Independence Avenue, S.W., Washington, DC 20585, and to the Office of Management and Budget (OMB), Paperwork Reduction Project (1910-0400), Washington, D.C. 20503.

(Hereinafter called the "Applicant") HEREBY AGREES to comply with Title VI of the Civil Rights Act of 1964 (Pub. L. 88-352), Section 16 of the Federal Energy Administration Act of 1974 (Pub. L. 93-275), Section 401 of the Energy Reorganization Act of 1974 (Pub. L. 93-438), Title IX of the Education Amendments of 1972 as amended (Pub. L. 92-318, Pub. L. 93-588 and Pub. L. 94-482), Section 504 of the Rehabilitation Act of 1973 (Pub. L. 93-112), the Age Discrimination Act of 1975 (Pub. L. 94-135), Title VIII of the Civil Rights Act of 1968 (Pub. L. 90-284), the Department of Energy Organization Act of 1977 (Pub. L. 95-91), and the Energy Conservation and Production Act of 1976 as amended (Pub. L. 94-385), and Title 10, Code of Federal Regulations, Part 1040. In accordance with the above laws and regulations issued pursuant thereto, the Applicant agrees to assure that no person in the United States shall on the ground of race, color, national origin, sex, age, or handicap be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity in which the Applicant receives Federal assistance from the Department of Energy.

Applicability and Period of Obligation

In the case of any service, financial aid, covered employment, equipment, property, or structure provided, leased, or improved with Federal Assistance extended to the Applicant by the Department of Energy, this assurance obligates the Applicant for the period during which Federal Assistance is extended. In the case of any transfer of such service, financial aid, equipment, property, or structure, this assurance obligates the transferee for the period during which Federal assistance is extended. If any personal property is so provided, this assurance obligates the Applicant for the period during which it retains ownership or possession of the property. In all other cases this assurance obligates the Applicant for the period during which the Federal assistance is extended to the Applicant by the Department of Energy.

Employment Practices

Where a primary objective of the Federal assistance is to provide employment or where the Applicant's employment practices affect the delivery of services in programs or activities resulting from Federal assistance extended by the Department, the Applicant agrees not to discriminate on the ground of race, color, national origin, sex, age, or handicap in its employment practices. Such employment practices may include, but are not limited to, recruitment, recruit advertising, hiring, layoff or termination, promotion, demotion, transfer, rates of pay, training, and participation in upward mobility programs or other forms of compensation and use of facilities.

Subrecipient Assurance

The Applicant shall require any individual, organization, or other entity with whom it subcontracts, subgrants, or subleases for the purpose of providing any service, financial aid, equipment, property, or structure to comply with laws cited above. To this end, the subrecipient shall be required to sign a written assurance form, however, the obligation of both recipient and subrecipient to ensure compliance is not relieved by the collection or submission of written assurance forms.

Data Collection and Access to Records

The Applicant agrees to compile and maintain information pertaining to programs or activities developed as a result of the Applicant's receipt of Federal assistance from the Department of Energy. Such information shall include, but is not limited to the following: (1) the manner in which services are or will be provided and related data necessary for determining whether any persons are or will be denied such services on the basis of prohibited discrimination; (2) the population eligible to be served by race, color, national origin, sex, age, and handicap; (3) data regarding covered employment including use or planned use of bilingual public contact employees serving beneficiaries of the program where necessary to permit effective participation by beneficiary unable to speak or understand English; (4) the location of existing or proposed facilities connected with the program and related information adequate for determining whether the location has or will have the effect of unnecessarily denying access to any person on the basis of prohibited discrimination; (5) the present or proposed membership by race, color, national origin, sex, age, and handicap in any planning or advisory body which is an integral part of the program; and (6) assure compliance by recipients with laws cited in the first paragraph of this assurance.

The Applicant agrees to submit requested data to the Department of Energy regarding programs and activities developed by the Applicant from the use of Federal assistance funds extended by the Department of Energy. Facilities of the Applicant (including the physical plants, buildings, or other structures) and all records, books, accounts, and other sources of information pertinent to the Applicants compliance with the civil rights laws shall be made available for inspection during normal business hours on request of an officer or employee of the Department of Energy specifically authorized to make such inspections. Instructions in this regard will be provided by the Directors Office of Equal Opportunity, U.S. Department of Energy.

This assurance is given in consideration of and for the purpose of obtaining any and all Federal grants, loans, contracts (excluding procurement contracts), property discounts, or other Federal assistance extended after the date hereto, to the Applicants by the Department of Energy, including installment payments on account after such data of application for Federal Assistance which are approved before such date. The Applicant recognizes and agrees that such Federal assistance will be extended in reliance upon the representations and agreements made in this assurance and that the United States shall have the right to seek judicial enforcement of this assurance. This assurance is binding on the Applicant, its successors, transferees, and assignees, as well as the persons whose signatures appear below and who are authorized to sign this assurance on behalf of the Applicant.

All **technical reports** submitted to the DOE **must** be accompanied by a completed and signed FETC F 2050.4 addressing patent information. Any patentable and/or proprietary information contained in the report must be identified and marked in accordance with the FAR 52.227.14 Rights in Data - General clause.

ATTACHMENT B (Continued)

ATTACHMENT TO THE FEDERAL ASSISTANCE REPORTING CHECKLIST

GENERAL INSTRUCTIONS FOR THE PREPARATION AND SUBMISSION OF REPORTS

1. INTRODUCTION

The Federal assistance recipient shall prepare and submit (postage prepaid) the plans and reports indicated on the "Federal Assistance Reporting Checklist," to the addressee identified on the checklist. The level of detail the recipient provides in the plans and reports shall be commensurate with the scope and complexity of the effort and shall be as delineated in the guidelines and instructions contained herein. The prime recipient shall be responsible for acquiring data from any contractors or subrecipients to ensure that data submitted are compatible with the data elements which prime recipients are required to submit to DOE. Plans and reports described herein are in addition to any other reporting requirements of the Federal assistance instrument.

2. PROGRAM/PROJECT MANAGEMENT REPORTING

- (a) Federal Assistance Milestone Plan (DOE F 4600.3) and Milestone Log (DOE F 4600.3A). The milestone plan is used as a planning tool, establishing the time schedule for accomplishing the planned work. Usually, it is accompanied by the DOE F 4600.3A, "Milestone Log." Portrays the major milestones of the project in bar chart format. The purpose of the plan is to establish the recipient's time schedule for accomplishing planned events and milestones. It covers the life of the project and is to be organized by major project activities, such as those performed at work breakdown structure Level 2. Intermediate events and critical milestones are further identified in an attached "milestone log" and include the identification number, descriptive name of the event or milestone, and the scheduled date of completion.
- (b) Federal Assistance Management Summary Report (DOE F 4600.5). A graphic presentation of costs and milestone status that provides rapid visual analysis and trend forecasting. The funding levels should represent all available resources. Recipient provides summary cumulative cost and activity data for each reporting period. (Refer to the back of the form for more detailed instructions.)
- (c) Federal Assistance Program/Project Status Report (Form 4600.6). A concise narrative describing the current status of the effort. The report allows recipients to communicate developments, achievements, changes and problems to the Department. Recipient enters brief narrative discussion of the following topics: approach changes; performance variances, accomplishments, or problems; open times; and status assessment and forecast. Each of these topics is addressed, as appropriate, for a given reporting period and the report is submitted periodically, as required, during the life of the project.
- (d) Financial Status Report (Standard Form 269 or 269A). Recipient provides regular periodic accounting of project funds expended. The accounting may be on either a cash or accrual basis. Actual total expenditures and obligations incurred, but not paid, are reported for each reporting period for each major activity. They should correlate with those identified on the "Federal Assistance Milestone Plan" when the "Federal Assistance Milestone Plan" is required. Provision is made to identify the Federal and non-Federal share of project outlays for each identified activity.
- (e) Federal Cash Transactions Report (Standard Form 272). Content shall be as prescribed in 10 CFR 600.152 for Institutions of higher Education, Hospitals, Other Non-Profit Organizations and Commercial Organizations or 10 CFR 600.241 for States and Local Governments.

3. TECHNICAL INFORMATION REPORTING

- (a) Technical Progress Report. Summarizes all project work performed during a specific reporting period (e.g., quarterly, semi-annual, or yearly) and planned for the subsequent period. The report should provide detailed information on the technical and scientific results achieved during the past reporting period including manuscripts published, significant accomplishments, problems encountered, listing of publications and presentations. In lieu of detailed technical information, appended copies of journal articles may be referred to in the text of the report; however, this must be approved by the Contracting Officer Representative (COR). (Preprints will generally not satisfy this requirement.) The content and format of the technical progress report shall contain the sections identified in the Organization of Technical Reports found under the "Format for Submission of Electronic/Paper Versions of Technical Reports (July 1997)," below.
- (b) Topical Report. Provides a comprehensive statement of the technical results of work performed for a specific technical task or subtask (where such report is specifically required), or detail significant new scientific or technical advances and includes journal articles, conference papers, etc. that are related to the DOE-funded activity.
- (c) Final Technical Report. Documents and summarizes work for the entire period, including implications of results and recommendations for future work, if applicable, based upon the experiences and results gained. The report will include the original hypotheses of the project and present the investigative approaches used, complete with problems encountered or departures from the planned methodology, and an assessment of their impact on the project results. The report shall include tabulation of data, figures, photographs, and other bibliographic citations in sufficient detail to comprehensively explain the results achieved under the project. The content and format of the Final Technical Report shall contain the sections identified in the Organization of Technical Reports found under the "Format for Submission of

Electronic/Paper Versions of Technical Reports (July 1997)," below.

If the Final Technical Report period falls within less than three (3) months from a quarterly, semi-annual, or yearly technical report, the Final Technical Report can be accepted as fulfillment for both requirements. However, the Final Technical Report's title/cover page must state, as an example, "The Quarterly Technical Report for report period January 1, 19XX to March 31, 19XX is incorporated within."

- (d) Software. Major pieces of computer software developed largely as a result of the performance of this effort shall be delivered to the Government shortly after development or at the completion of the effort, as appropriate. The software shall be delivered together with sufficient documentation concerning its development and use to permit future use by others, and to provide a firm basis for allowing modifications to be made in any subsequent development efforts. Unless otherwise specified, software shall be written in a standard computer language such as Fortran 77, operate on the VAS VMS version 5.1 operating system or an IBM PC-compatible personal computer running MS/DOS, and should not incorporate or be dependent on the use of proprietary software.

4. TECHNICAL REPORT DUE DATES

Reports designated as "Quarterly (Q)" are to be submitted on the basis of calendar quarters or portions thereof, i.e.:

<u>Period</u>	<u>Due Date</u>
January through March	April 30
April through June	July 30
July through September	October 30
October through December	January 30

Reports designated as "Semi-Annual (S)" are to be submitted within 30 calendar days after end of the program half-year.

Example: If the award begins 01/01/XX, the first report period would end 06/30/XX and the report would be due 07/30/XX.

Reports designated as "Yearly (Y)" are to be submitted within 30 calendar days after end of the program year.

Example: If the award begins 01/01/XX, the first report period would end 12/31/XX and the report would be due 01/31/XX.

5. FORMAT FOR SUBMISSION OF ELECTRONIC/PAPER VERSIONS OF TECHNICAL REPORTS (JULY 1997)

CAUTION: All reports containing restricted, proprietary, or patentable information shall not be submitted electronically. Reports containing the aforementioned data must be appropriately marked, identified, and submitted in triplicate (one original and two (2) paper copies).

(a) Preparation

- (1) General. The awardee is responsible for providing all technical reports that are identified in the Reporting Requirements Checklist. The awardee shall submit one good quality hard copy using either permanent or alkaline paper plus an electronic version of each technical report, including, but not limited to, all text, tables, diagrams, photographs, schematics, graphs, and charts. Electronic reports shall be submitted in the Adobe Acrobat Portable Document Format (PDF), WordPerfect, or MS Word.

- (2) Organization of Technical Reports. The following sections should be included, as appropriate, in all interim technical reports in the sequence shown:

- * Title Page - see title page sequence below.
- * Disclaimer - see disclaimer paragraph below.
- * Abstract - should be a brief, concise summary of the report
- * Table of Contents
 - List(s) of Graphical Materials
 - Introduction

- * Executive Summary - should be a well organized summary that highlights the important accomplishments of the research during the reporting period. It should be no less than one page and no more than two pages in length, and should be single spaced. This summary must be much more comprehensive than the traditional "abstract".

- * Experimental - should describe, or reference all experimental methods being used for the research. It should also provide detail about materials and equipment being used. Standard methods can be

referenced to the appropriate literature, where details can be obtained. Equipment should be described only if it is not standard, or if information is not available thru the literature or other reference publications.

* Results and Discussion - extremely important to include enough relevant data, especially statistical data, to allow the project manager to justify the conclusions. It also means that only relevant data should be included in the report. With the relevant data, explain how you interpreted the data and how that relates to the original purpose of the research. Make it very clear on how this research effort solved or contributed to solving the original problem.

* Conclusion - should not simply reiterate what was already included in the "Results and Discussion" section. It should summarize what has already been presented, and include any logical implications, to include how the successes are relevant to technology development in the future. This is extremely important, since "relevancy" continues to be a criteria of the program.

* References
Bibliography
List of Acronyms and Abbreviations
Appendices (if necessary)

* Any section denoted by an asterisk is required.

The **Title Page** must contain the following information **IN THE FOLLOWING SEQUENCE**:

Report Title

Type of Report (Quarterly, Semi-Annual, Annual, Topical, Final, etc.)

Reporting Period Start Date

Reporting Period End Date

Principal Author(s)

Date Report was Issued (Month [spelled out] and Year [4 digits])

DOE Award Number (e.g., DE-FG26-97FT12345) and, If Appropriate, Task Number

Name and address of submitting organization. (This section should also contain the name and address of significant contractors or subcontractors who participated in the production of the report.)

The **Disclaimer** must follow the title page, and must contain the following paragraph:

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

- (3) Other Documents Not Identified in the Reporting Checklist (Journal Articles, Conference Papers and Proceedings, etc.). The awardee shall submit an electronic version of each such document, including, but not limited to, all text, tables, diagrams, photographs, schematics, graphs, and charts. Such documents shall be submitted in the software format identified in Paragraph 1.A. above.
- (4) Company Names and Logos. Except as indicated in B. above, company names, logos, or similar material should not be incorporated into reports.
- (5) Copyrighted Material. Copyrighted material should not be submitted as part of a report unless written authorization to use such material is received from the copyright owner and is submitted to DOE with the report.
- (6) Measurement Units. All reports to be delivered under this instrument shall use the SI Metric System of Units as the primary units of measure. When reporting units in all reports, primary SI units shall be followed by their U.S. Customary Equivalents in parentheses ().

The recipient shall insert the text of this clause, including this paragraph, in all subgrants or subcontracts under this award.

Note: SI is an abbreviation for "Le Systeme International d'Unites."

(b) Electronic Media Standard

- (1) File Format. Production of high-quality, electronic documents is dependent on the quality of the input that is provided. Thus, the awardee shall submit an electronic version of all reports in the software format identified in Paragraph 1.A. above. Each report shall be an integrated file that contains all text, tables, diagrams, photographs, schematics, graphs, and charts.
- (2) Submission Format. The electronic file(s) shall be submitted via diskette, or CD-ROM. Diskettes or CD-ROMs must be labeled as follows:

DOE Award Number

Type of Report(s) (Quarterly, Semi-Annual, Annual, Topical, Final)

Reporting Period (if applicable)

Name of Submitting Organization

Name, Phone Number, and Fax Number of Preparer

Diskette: Diskettes must be 3.5" double-sided, high-density (1.4 Mbyte capacity). If file compression software is used to transmit a PDF file spanning more than one diskette, PKZIP from PKWare, Inc., is the required compression software. For diskettes only:

State the Number of Diskettes in the Set (e.g., 1/3)

CD-ROM: The electronic file(s) may be submitted on an ISO9660-format CD-ROM.

- (3) File Naming. In naming the electronic file, awardee shall use the standard eight-character naming convention for the main file name, and the three character extension applicable to the software use, e.g.: .pdf for Adobe; .doc for MS Word, etc.

For the main file name, the first five characters are the last five digits from the award number; e.g., for Award Number DE-FG26-97FT12345, the first five characters are 12345.

The next character is a letter that corresponds to the type of report: R is for the Technical Report.

The remaining two characters indicate the chronological number of the particular type of report; e.g., Quarterly Technical Progress Reports for a 5-year award are numbered R01 through R20. If monthly, annual, and a Final Technical Report are also required, the numbers would run from R01 through R86 (60 monthly reports, 20 quarterly reports, 5 annual reports, and 1 final report).

Thus, the main file name for the Sixth Quarterly Technical Progress Report under Award No. DE-FG26-97FT12345 (and no other technical progress reports are required) would be 12345R06. There will be one file submitted on a disk. The Technical Report file name would be 12345R06.PDF and will be a PDF file.

6. ENVIRONMENTAL REPORTING

In response to the requirements of the National Environmental Policy Act of 1969 (NEPA) and related federal statutes the U. S. Department of Energy (DOE) requires submission of various documents that assess the environmental aspects and projected impacts of proposed actions. **For the purposes of this award, these documents include submission of the following reports:**

- Hazardous Substance Plan
- Hazardous Waste Report

Additional information about the requirements of the National Environmental Policy Act can be found in the DOE NEPA Compliance Guide and 40 CFR 1021.

- (a) Hazardous Substance Plan. The Plan shall specifically identify each Hazardous Substance (as defined under 40 CFR 261, Subpart D, entitled Lists of Hazardous Wastes) anticipated to be purchased, utilized, or generated in the performance of this Federal assistance instrument. For each such Hazardous Substance identified, the Plan shall specifically provide the following information:

Description of Substance/Chemical

EPA Hazardous Waste Number

EPA Hazard Code

Anticipated Quantity to be purchased, utilized, or generated

Anticipated Hazardous Waste Transporter

Anticipated Hazardous Waste Disposal Facility Contractor and Location (City/Municipality, State)

Anticipated Treatment Method

- (b) Hazardous Waste Report Report shall specifically identify each Hazardous Waste (as defined under 40 CFR 261, Subpart D, entitled Lists of Hazardous Wastes) actually utilized, or generated in the performance of this Federal assistance instrument. For each such Hazardous Waste identified, the Report shall specifically provide the following information:

Description of Substance/Chemical
EPA Hazardous Waste Number
EPA Hazard Code
Actual Quantity Disposed
Actual Hazardous Waste Transporter
Actual Hazardous Waste Disposal Facility Contractor
and Location (City/Municipality, State)
Actual Disposal Date
Actual Treatment Method

The Hazardous Waste Report is intended as a final reconciliation of anticipated versus actual Hazardous Substances purchased, utilized, or generated in the performance of this Federal assistance instrument.

- (c) Environmental Compliance Plan (ECP). The ECP should outline an approach to implementing an environmental monitoring and reporting strategy. This strategy should include plans for submitting a Quality Assurance/Quality Control Plan and Pollution Prevention Plan,* conducting environmental monitoring of the proposed action and submitting Environmental Status Reports. The ECP should also address any concerns and/or deviations associated with the reporting and monitoring documents.

* If an ECP is required, the format of the QA/QC Plan and Pollution Prevention Act will be determined in conjunction with FETC environmental staff.

Suggested Format for Environmental Compliance Plan (ECP)

- I. SUMMARY OF PROPOSED PROJECT
- II. FEDERAL REGULATORY COMPLIANCE (Discuss how each of the following will be complied with, if applicable.)
 - A. National Historic Preservation Act
 - B. Endangered Species Act
 - C. Fish and Wildlife Coordination Act
 - D. Floodplain/Wetlands Regulations
 - E. Coastal Zone Management Act
 - F. Farmland Protection Policy Act
 - G. American Indian Religious Freedom Act
 - H. Wild and Scenic Rivers Act
 - I. Resource Conservation & Recovery Act
 - J. Comprehensive Environmental Response, Compensation and Liability Act
 - K. Clean Air Act
 - L. Clean Water Act
 - M. Pollution Prevention Act
- III. STATE AND LOCAL REGULATORY COMPLIANCE (Discuss how any state and local regulations will be complied with.)

- (d) Environmental Monitoring Plan (EMP). If DOE's analysis of the potential environmental impacts of the proposed action (through review of the proposer's Environmental Volume or Environmental Assessment Questionnaire) identifies a need for environmental monitoring, the recipient will also submit a draft Environmental Monitoring Plan (EMP) within thirty (30) days of contract award. After consultation with DOE, the draft EMP will be revised, as necessary, and a final EMP will be in place prior to the initiation of any activities that are not categorically excluded under NEPA. The EMP may be revised as the project dictates.

The EMP should evaluate air, land, and water resources, and waste production, using three specific types of monitoring:

- A. Compliance Monitoring,
- B. Unregulated Pollutant Monitoring, and, if necessary,
- C. NEPA-Related Monitoring.

Compliance monitoring, i.e., environmental and health monitoring required by Federal, State, and local regulatory agencies, should detail the location, frequency, duration, and substances being monitored. All necessary applications, permits, and licenses should be identified.

Unregulated pollutants, both the amount and type of each, should be monitored. This includes those pollutants (a) not currently regulated by State or Federal laws but for which new regulations are expected in the near future; (b) which may cause environmental or health concerns based on hazardous/toxic compound lists; and (c) which are expected in discharge streams based on test data or process chemistry.

Finally, NEPA-related monitoring should be implemented as necessary. It should identify and/or confirm the impacts of the substances produced and performance of the specific technologies as predicted in the NEPA document. It should also include reporting on any mitigation action identified in the Finding of No Significant Impact or Record of Decision as a condition of approval of the proposed action (reported annually).

- (e) Environmental Status Reports (ESRs). After approval of the comprehensive EMP, and as deemed necessary by the DOE Project Manager, the results of sampling conducted and other environmental compliance information should be submitted in the form of Environmental Status Reports (ESRs). The necessity of these reports will depend on the size and nature of the project; they will be required quarterly.

The data reported in the ESRs will supplement the project's NEPA documentation. It will also ensure that project impacts (a) do not violate applicable environmental regulations and (b) are not detrimental to human health or the environment. The information will also provide a database that can be utilized to mitigate environmental problems associated with commercializing any proposed technologies.

Suggested Format for Environmental Status Reports

- I. SUMMARY OF MONITORING PERFORMED (Compliance and Supplemental Monitoring)
 - A. MONITORING PARAMETERS
 1. Location.
 2. Stage of project (e.g., preconstruction, operational, etc.).
 3. Source to be monitored (e.g., stack emissions).
 4. Method of monitoring.
 - B. DATA ANALYSIS
 1. Identification/characterization of emissions, effluents, etc., and their concentration.
 2. Identification of problem areas/non-compliance.
 3. Suggestions for modifications/changes to the system.
 4. Recommendations to revise Monitoring Plan.
- II. PERMIT COMPLIANCE STATUS
 - A. Attach copies of compliance reports, analyses, correspondence between the Recipient and the appropriate regulatory agencies.
 - B. Attach copies of all manifests, shipping documents, etc., pertaining to the disposal of wastes generated from the project.

7. PROPERTY REPORTS

- (a) Annual Inventory Report of Government-Owned Property. Provides a listing of all federally-owned property in the custody of the recipient in accordance with 10 CFR Part 600, Sections 600.130-137.
- (b) Final Property Inventory Report. Provides a listing of all federally-owned and recipient acquired property in the custody of recipient for further Federal agency utilization in accordance with 10 CFR Part 600, Sections 600.130-137.
- (c) High Risk Property Report. Provides a listing of all federally-owned property in the custody of recipient in accordance with DOE PMR 109-1.53, "Management of High Risk Property."